DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/Ala Rte: 80 PM: 13.2/13.9
File #: 69.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024773
Date Inspected: 08-Jun-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island

OSM Arrival Time: 1900
OSM Departure Time: 700
Location: Shanghai, China

CWI Name:	See below	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☐ Yes ☑ No ☐ N/A	**Rod Oven in Use:**	☑ Yes ☐ No ☐ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☐ Yes ☑ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: OBG Components

Summary of Items Observed:

On this date Caltrans OSM Quality Assurance Inspector (QA Inspector) George Goulet was present during the times noted above for observations relative to the work being performed.

OBG Trial Assembly Area

This QA Inspector randomly observed the following work in progress in the OBG Trial Assembly Area:

SMAW welding of weld joints SEG3007AT-592~595 located on PCMK OBG 13AE. Welder was identified as 068859. QC was identified as ABF CWI Wang Jun (QC1.) Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Xie Ming Feng (QCA1), who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-P-2112-FCM-1 and WPS-B-P-2114-FCM-1 as verbally identified by QCA1.

SMAW repair welding of various weld joints located on PCMK OBG 13AE at the side plate I-ribs on the south (bike path) side. Welder was identified as 204339. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-345-SMAW-2G(2F)-FCM-repair-1 as verbally identified by QCA1. QCA1 informed this QA Inspector that the weld repairs were the result of visual inspection (VT) by ZPMC and ABF inspectors.

FCAW repair welding of weld joints SEG3011B-091, SEG3011B-115 located on PCMK OBG 13CE. Welder was identified as 052696. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring

the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-T-2233-ESAB as displayed on ZPMC Weld Repair Report B-WR21225 and ZPMC Weld Repair Report B-WR21122, respectively, as presented to this QA Inspector and verbally identified by QCA1.

FCAW welding of weld joints OBE14G-001, 002 located on PCMK OBG 14E. Welder was identified as 050242. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA1, who was not a CWI. Weld variables recorded by QCA1 appeared to comply with WPS-B-T-2132-ESAB as verbally identified by QCA1.

SMAW repair welding of weld joint OBE13B-001 located on PCMK OBG 13AE/13BE, bottom plate transverse joint. Welder was identified as 044772. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was ZPMC QC Wang Xiang Pin (QCA2), who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-345-SMAW-4G(4F)-FCM-1 as displayed on ZPMC Weld Repair Report B-CWR2993, Rev.3.

FCAW welding of weld joints SEG3007B-110; SEG3007C-216; SEG3009S-001, 058 located on PCMK OBG 13AE. Welder was identified as 066746. QC was identified as QC1. Assisting QC1 at this location and appearing to be monitoring the welding operation and recording data was QCA2, who was not a CWI. Weld variables recorded by QCA2 appeared to comply with WPS-B-T-2232-ESAB as verbally identified by QCA2.

SMAW welding of weld joints SEG3007V-133, 134 located on PCMK OBG 13AE, FL3 area. Welder was identified as 049769. QC was identified as QC1. No QC personnel were present in the area to be monitoring the welding operation and recording data. When this QA Inspector informed QCA1 and QCA2 of the welding operation, neither was aware of it. No weld variables had been recorded by QC personnel. The welding was being performed on a Seismic Performance Critical Member (SPCM) Floor Beam to fill the gap of a flame cut between it and the Partial Height Diaphragm. The flame cut was located at the designed joint SEG3007V-133, 134. No joint preparation was performed to the rough flame cut edges prior to welding. No approved weld repair procedure was observed onsite during this welding operation. The root opening was measured between 12mm to 23mm. This non conforming repair was located 13AE Floor Beam panel point (PP) 119-1500 at the FL3 Partial Height Diaphragm web. Weld joints at SEG3007V-133, 134 were designed as 8mm fillet welds. ZPMC Quality Control (QC) and ABF QC were unaware of this work and welding being performed inside their work stations. This QA Inspector generated an Incident Report concerning the above noted issues. See that report and photos below for more information.

Blast Bay 4
In response to a verbal NDT Inspection Notification for magnetic particle testing (MT) inspection of the following in Blast Bay 4:

This QA Inspector performed random visual testing (VT) and then MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control personnel. This QA Inspector generated an MT report for this date. The members were identified as follows:

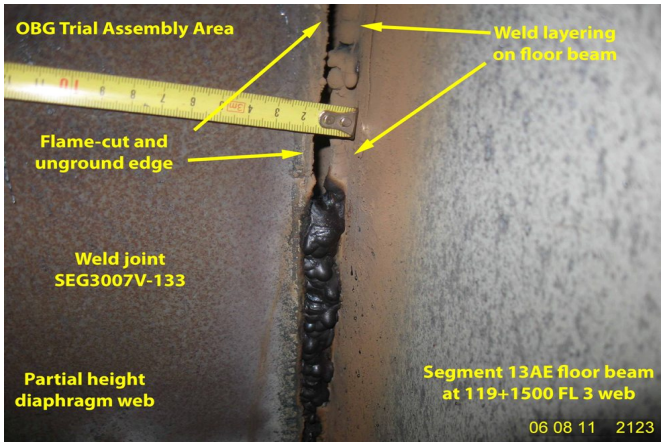
OBG Segment 13AW, SEG3013K. The weld designations reviewed were: 053, 057, 051, 065, 069, 073, 077, 081,

WELDING INSPECTION REPORT

(Continued Page 3 of 3)

085, 089. No apparent MT indications were observed in weld numbers 053, 057, 051, 065, 069, 073, 077, 081, 085. However, weld number SEG3013K-089 was visually unacceptable due to being less than flush in 3 locations. MT was not performed on weld number SEG3013K-089.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact James Devey 15000026784, who represents the Office of Structural Materials for your project.

Inspected By:	Goulet,George	Quality Assurance Inspector
Reviewed By:	Riley,Ken	QA Reviewer